b. a measurement loop located on the substrate, the measurement loop including:

i. a pair of spaced-apart conductors each having a proximal end and a distal end, the proximal ends located at the proximal end of the substrate for connection to an instrument,

ii. a test cell connected across the distal ends of the conductors, the test cell having an analyte reaction zone with an electrical impedance that varies in response to analyte concentration; and

c. a noise cancellation loop electrically distinct from the analyte reaction zone and physically arranged to be exposed to substantially the same electromagnetic environment as the measurement loop and electrically connected to substantially cancel the effect of electromagnetically propagated field energy irradiating the biosensor cell assembly.

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21. A method of reducing electromagnetic interference in a measurement loop of the type providing an indication of analyte concentration using a response current passing through a test cell having an analyte reaction zone by way of a pair of conductors on a substrate, the method comprising:

a. physically aligning a noise cancellation loop with a measurement loop formed by the test cell and pair of conductors on a substrate such that the noise cancellation loop is electrically distinct from the analyte reaction zone; and

b. connecting the noise cancellation loop in anti-parallel with the measurement loop such that any stray electromagnetic field induced current in the measurement loop is cancelled by a current induced by the same stray electromagnetic field in the noise cancellation loop.

REMARKS

The above amendments to independent claims 1 and 21 are submitted with the following remarks to be fully responsive to the final Office Action dated September 5, 2002. It is further submitted that this response and the Request for Continued Prosecution to which this response is attached are timely filed in the shortened-statutory